

WHAT IS CLAIMED IS:

1. A substrate process chamber component
5 comprising:
at least one internal component formed from
anodized aluminum alloy; and
a yttrium oxide coating formed on a surface of
the at least one internal component.
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2. A substrate process chamber component as in
claim 1, and wherein the at least one internal component is
a chamber liner.
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3. A substrate process chamber component as in
claim 1, and wherein the at least one internal component is
a cathode liner.
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4. A substrate process chamber component as in
claim 1, and wherein the at least one internal component
comprises a chamber door.
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5. A substrate processing chamber component as in
claim 1, and wherein the anodized aluminum alloy
comprises anodized high purity aluminum alloy.
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6. A method of manufacturing a substrate process
chamber component, the method comprising:
providing at least one internal component for
utilization in a substrate process chamber, the at least

one internal component formed from anodized aluminum alloy; and
applying a yttrium oxide coating to a surface of the at least one internal component.

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7. A method as in claim 6, and wherein the yttrium oxide coating is applied by plasma spraying.

10 8. A method as in claim 6, and further comprising:
performing a finishing step on the yttrium oxide coating.

15 9. A method as in claim 8, and wherein the finishing step comprising:

manually holding a grinding tool on the yttrium oxide coating.

20 10. A method as in claim 8, and further comprising:
performing a cleaning step on the finished yttrium oxide coating.

11. A method as in claim 11, and wherein the cleaning step comprises:

CO₂ snow cleaning the yttrium oxide coating;

25 and

rinsing the yttrium oxide coating using deionized (DI) water.

30 12. A method as in claim 6, and wherein the anodized aluminum alloy is anodized high purity aluminum alloy.